We claim:

1. A method for treating a disorder characterized by excessive proliferation of tissue comprising

implanting a cell-matrix structure comprising a matrix having attached thereto an effective amount of cells stably expressing a gene encoding at least one biological modifier to stop or regress the excessive tissue proliferation,

wherein the cells are either genetically engineered to produce the biological modifier or of a different cell type than the tissue that has proliferated excessively.

2. The method of claim 1 wherein the disorder is selected from the group consisting of malignant and benign neoplasias, vascular, inflammatory conditions causing excessive proliferation of cells, keloid formation, intraperitoneal or intrathoracic adhesions, endometriosis, congenital or endocrine abnormalities, and infections causing excessive proliferation of cells.

3. The method of claim 1 wherein the matrix is selected from the group consisting of fibrous scaffolds, polymeric hydrogels, and micromachine or micromolded substrates.

4. The method of claim 1 wherein the cells are selected from the group consisting of tissue specific cells, progenitor cells, and stem cells.

5. The method of claim 4 wherein the cells are genetically engineered to produce the biological modifier.

6. The method of claim 5 wherein the biological modifier is a protein.

7. The method of claim 1 wherein the biological modifier is selected from the group consisting of angiogenesis inhibitors, MIS, Herceptin, interferons, TGF-beta factors, steroid or orphan receptors, chimeric transcription factors, antibodies and antisense.

8. The method of claim 7 wherein the biological modifier is MIS and the cells are engineered to secrete biologically active MIS to produce serum levels effective to stop tissue proliferation or regress excessive tissue.

9. The method of claim 8 wherein the cell-matrix structure is

implanted into a patient with a disorder selected from the group consisting of vulvar epidermoid carcinomas, cervical carcinomas, endometrial adenocarcinomas, ovarian adenocarcinomas, ocular melanomas, prostate, lymphoid, breast, cutaneous, and germ cell tumors.

10. The method of claim 1 wherein the inflammatory disorder is restenosis and the cells are not endothelial cells, or an endocrine disorder.

11. The method of claim 1 wherein the cells are genetically engineered to express the biological modifier from recombinant DNA encoding the biological modifier.

12. The method of claim 1 wherein the cells are selected based on natural production of the biological modifier and the cell-matrix structure is implanted at a site where the biological modifier can stop proliferation or cause tissue regression.

13. A cell-matrix structure for implantation into a patient having attached thereto an effective amount of cells stably expressing a gene encoding at least one biological modifier to stop or regress excessive tissue proliferation in a patient in need thereof, wherein the cells are either genetically engineered to produce the biological modifier or of a different cell type than the tissue that has proliferated excessively.

14. The cell-matrix structure of claim 13 wherein the cells produce a biological modifier effective to treat a disorder selected from the group consisting of malignant and benign neoplasias, vascular, inflammatory conditions causing excessive proliferation of cells, keloid formation, endometriosis, congenital or endocrine abnormalities, and infections causing excessive proliferation of cells.

15. The cell-matrix structure of claim 13 wherein the matrix is selected from the group consisting of fibrous scaffolds, polymeric hydrogels, and micromachine or micromolded substrates.

16. The cell-matrix structure of claim 13 wherein the cells are selected from the group consisting of tissue specific cells, progenitor cells, and stem cells.

17. The cell-matrix structure of claim 13 wherein the cells are

genetically engineered to produce the biological modifier.

18. The cell-matrix structure of claim 13 wherein the biological modifier is a protein.

19. The cell-matrix structure of claim 13 wherein the biological modifier is selected from the group consisting of angiogenesis inhibitors, MIS, angiogenesis inhibitors, MIS, Herceptin, interferons, TGF-beta factors, steroid or orphan receptors, chimeric transcription factors, antibodies and antisense.

20. The cell-matrix structure of claim 19 wherein the biological modifier is MIS and the cells are engineered to secrete biologically active MIS to produce serum levels effective to stop tissue proliferation or regress excessive tissue.

21. The cell-matrix structure of claim 20 wherein the cell-matrix structure is implanted into a patient with a disorder selected from the group consisting of vulvar epidermoid carcinomas, cervical carcinomas, endometrial adenocarcinomas, ovarian adenocarcinomas, ocular melanomas, prostate, lymphoid, breast, cutaneous, and germ cell tumors.

22. The cell-matrix structure of claim 13 wherein the cells are genetically engineered to express the biological modifier from recombinant DNA encoding the biological modifier.

23. The cell-matrix structure of claim 13 wherein the cells are selected based on natural production of the biological modifier and the cells are implanted at a site where the biological modifier can stop proliferation or cause tissue regression.